NOAA FISHERIES
NATIONAL MARINE FISHERIES SERVICE

Authorizations and Permits for Protected Species (APPS)

File #: 1465 - 3R (2R in FR)
Title: Renew: Beneficial Use Reconnaissance Program

Applicant Information

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Project Information

File Number: 1465 - 3R (2R in FR)
Application Status: **Application Complete**
Project Title: Renew: Beneficial Use Reconnaissance Program and the National Rivers and Streams Assessment Program
Project Status: Renewal
Previous Federal or State Permit: 1465 - 2R
Permit Requested:
- ESA Section 10(a)(1)(A) permit (Pacific fish)

Where will activities occur? Idaho
State department of fish and game/wildlife: N/A
Research Timeframe: **Start:** 06/01/2012 **End:** 12/31/2016
Sampling Season/Project Duration: June through November of years 2012 - 2016.
Abstract:

The Idaho Department of Environmental Quality (IDEQ) is authorized to annually take listed salmon and steelhead while conducting research designed to (a) determine whether aquatic life is being properly supported in Idaho's rivers, streams and lakes, and (b) assess the overall condition of Idaho's surface waters. The fish would benefit from the research because the data it produces would be used to inform decisions about how and where to protect and improve water quality in the state. This renewal will allow for another five years of research, and will include both backpack and boat electrofishing of streams and rivers.

Project Description

Purpose: Task 1: Beneficial Use Reconnaissance Program and National Rivers and Streams Assessment (NRSA) Program General fish population inventory for wadeable streams.

The Idaho Department of Environmental Quality (Department) is responsible for the quality protection of Idaho's water. The federal Clean Water Act provides guidance for states to develop standards to protect water bodies based on their intended use, or "beneficial use." For example, if one of the beneficial uses of a river is designated as "salmonid spawning," then water quality standards are set to protect the water for the propagation of salmonids. In Idaho, beneficial use designations are required for aquatic life (cold water, seasonal cold water, warm water, salmonid spawning) and recreation (primary and secondary contact). Idaho's use designations also take into account water supplies (domestic, industrial, agricultural), wildlife, and aesthetics.

The Department's Beneficial Use Reconnaissance Program (BURP) determines whether aquatic life and recreational beneficial uses are being supported in Idaho's streams, rivers, and lakes. In essence, BURP is a cost-effective way to gather data about, or survey, a water body. BURP staff collect and analyze aquatic insects and fish, using them as biological indicators of water quality. Biological indicators are used because they are very sensitive to changes in water quality. For example, stoneflies, caddisflies, and mayflies spend the first part of their life cycles underwater. Their presence and abundance indicate whether the water is clean, and provide food for the various types of fish present. Generally, unpolluted waters support a greater variety of aquatic insects and fish than polluted waters. Just as the diversity of fish species present tells us about water quality, the age class distribution of salmonids provides information on the existence and status of the salmonid spawning beneficial use.

Each summer, Department BURP technicians follow standardized procedures (IDEQ, 2007) to collect aquatic insects, conduct fish surveys (using backpack electrofishing), measure water chemistry, and document habitat conditions from streams, rivers and lakes. These surveys are conducted during the low-flow season, from June 15 through October 31 of each year. BURP surveys are performed during the same time period each year so the information is comparable from one year to the next. BURP surveys are then evaluated using Idaho's standardized Water Body Assessment Guidance (Grafe et al., 2002). Water bodies found in good condition will be monitored again in future years. A pollution management plan, or Total Maximum Daily Load (TMDL), is developed for water bodies not meeting standards. These water bodies are known as "impaired."

The intention of the National River and Stream Assessment (NRSA) Program is to provide a probabilistic assessment of the condition of our Nation's rivers and streams and is designed to assess the condition of the Nation's rivers and streams (USEPA, 2007). It is similar to BURP in methodology with randomly selected sites on wadeable streams every five years. The NRSA wadeable stream crew also uses backpack electrofishing to sample fish populations.

Various federal, state and tribal agencies already sample and monitor the surface waters of Idaho. But there is no nationally consistent methodology in place, making the comparison of results difficult. NRSA aims to provide a "big-picture" profile of ecological conditions in the United States. Most current programs employ targeted sampling, which focuses on specific sites and particular problems and does not attempt to evaluate the overall condition of aquatic resources. NRSA employs a rigorous probability survey design that allows extrapolation of results from randomly selected samples to the entire water body system. Some traditional sampling and monitoring programs have also been criticized for their exclusive focus on physical and chemical properties of the water. NRSA uses a richer suite of indicators to assess the health of water bodies, including biological and landscape characteristics.

NRSA will help us better understand the general water quality condition of Idaho streams and rivers as they relate to the nation's waters. The Department's BURP monitoring methods are very similar to the NRSA methods. We expect that there will be some technology transfer between the two efforts that will ultimately improve monitoring and assessment in Idaho. In addition, nationally consistent methods for the collection and analysis of data will allow comparison of data over time and across states and regions. This will help us to identify trends and establish priorities.

Task 2: River Beneficial Use Reconnaissance Program (River BURP) and National Rivers and Streams Assessment (NRSA) Program General fish population inventory.

River BURP is similar methodology to wadeable streams BURP described in Task 1, with added emphasis on water bodies that are too large to be waded and are assessed with the aid of a boat or raft. The goal is the same as Task 1 (BURP) for the Idaho Department of Environmental Quality to assess the water quality and biological health of larger non-wadeable rivers. The Department usually runs one River BURP crew that employ boat electrofishing techniques.

The Department also runs one River NRSA field crew to sample Idaho's rivers using inflatable rafts once every five years. This river NRSA crew uses boat electrofishing equipment to survey fish populations in rivers. NRSA does not sample the same water body type every year, but samples them in a five year rotation with wetlands, lakes and shorelines as additional water body types.

Description: The Department's programs involve the collection, handling, measuring, vouchering, or release of fish, including juvenile salmonids. The most commonly used collection procedure is single pass electrofishing. The River BURP and River NRSA crews, which sample larger rivers, use a boat electrofisher, all other crews use backpack electrofishing equipment. All juvenile salmon and steelhead caught are counted, sampled for length and released. In the Salmon and Clearwater Basins all rainbow trout under 18" are considered and treated like juvenile steelhead. They may be anesthetized with CO2 first to limit stress. In all cases, the welfare of each fish is a primary concern for staff, and all necessary precautions are taken to ensure their health and survival. Individuals participating in research activities receive the proper training before being allowed to participate in Department research programs. Because of this care, past data show that while many fish are handled, mortality rates are so low that the impacts on the listed populations are small, and pose little threat to listed populations.
Renewal consolodates all electrofishing activities of the Department, including boat electrofishing, into a single permit. Previous backpack electrofishing activities conducted by the Department were included in annual 4(d) rule permits.

Supplemental Information

Status of Species: No new information provided.

Methods: The Department's programs involve the collection, handling, measuring, vouchering, or release of fish, including juvenile salmonids. The most commonly used collection procedure is single pass electrofishing. The Large River Boat crews (one BURP boat and one NRSA boat), which sample larger rivers such as the Salmon and Clearwater Rivers, uses a boat electrofisher, all other crews use backpack electrofishing equipment. Boat crews perform a single pass along the bank of the river in a series of six transects that alternate left bank and right bank. The center, open water portion of the river is not electrofished. All juvenile salmon and steelhead caught are counted, sampled for length and released. A description of methods for each Department research program is provided in IDEQ, 2007 (BURP); IDEQ, 2010 (River BURP); and USEPA, 2007 (NRSA).

Lethal Take: Not Applicable

Anticipated Effects on Animals: Effects will be minimal.

Measures to Minimize Effects to Listed Species: Electrofishing is conducted in accordance with NMFS guidelines, fish are kept in water as much as possible.

Resources Needed to Accomplish Objectives: The State of Idaho funds Task 1 and Task 2 through general funds provided by the state legislature. EPA funds the NRSA portions of Tasks 1 and 2 through grants to the Department.

Disposition of Tissues: There is little, if any, need or opportunity to collect dead specimens. However, if the occasion arises, we will maximize the use of specimens for scientific/ educational purposes. Specimens or parts thereof will be preserved and archived in the Orma J. Smith Museum of Natural History, College of Idaho. Contact:

William H. Clark, Director
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Public Availability of Product/Publications: Data, reports and publications regarding the Department's fishing activities are avaialble to the public upon request. Please contact Michael McIntyre, Surface Water Program Manager at Idaho Department of Environmental Quality, 1410 North Hilton Street, Boise, ID 83706.

Federal Information

Federal Agency	Type	Authorization Number and Title	Date Signed	Expiration Date	Listing Units/Stocks Covered	Comments

U.S. Environmental Protection Agency (EPA)	Funding	E2110508 National Rivers and Streams Assessment	Chinook Salmon, Snake River fall-run (NMFS Threatened);Chinook Salmon, Snake River spring/summer-run (NMFS Threatened);Sockeye Salmon, Snake River (NMFS Endangered);Steelhead, Snake River Basin (NMFS Threatened)	annual grant negotiated every year. Authorization number is from 2008/2009 grant year.

Location/Take Information

Location

Research Area: **State:** ID **Stream Name:** .
Location Description: Throughout the Salmon and Clearwater Basins.

Take Information

Line	Ver	Species	Listing Unit/Stock	Production /Origin	Life Stage	Sex	Expected Take	Indirect Mort	Take Action	Observe /Collect Method	Procedure	Run	Transport Record	Begin Date	End Date
5		Salmon, Chinook	Snake River spring/summer-run (NMFS Threatened)	Natural	Juvenile	Male and Female	200	2	Capture/Handle/Release Fish	Electrofishing, Backpack		Spring/Summer	N/A	6/1/2012	12/31/2016
6		Salmon, Chinook	Snake River spring/summer-run (NMFS Threatened)	Natural	Juvenile	Male and Female	200	2	Capture/Handle/Release Fish	Electrofishing, Boat		Spring/Summer	N/A	6/1/2012	12/31/2016
7		Salmon, Chinook	Snake River fall-run (NMFS Threatened)	Natural	Juvenile	Male and Female	100	1	Capture/Handle/Release Fish	Electrofishing, Boat		Fall	N/A	6/1/2012	12/31/2016
8		Steelhead	Snake River Basin (NMFS Threatened)	Natural	Juvenile	Male and Female	500	5	Capture/Handle/Release Fish	Electrofishing, Backpack		Summer	N/A	6/1/2012	12/31/2016
9		Steelhead	Snake River Basin (NMFS Threatened)	Natural	Juvenile	Male and Female	300	3	Capture/Handle/Release Fish	Electrofishing, Boat		Summer	N/A	6/1/2012	12/31/2016
10		Salmon, sockeye	Snake River (NMFS Endangered)	Natural	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Backpack		N/A	N/A	6/1/2012	12/31/2016

11		Salmon, sockeye	Snake River (NMFS Endangered)	Natural	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Boat		N/A	N/A	6/1/2012	12/31/2016
12		Salmon, Chinook	Snake River spring/summer-run (NMFS Threatened)	Listed Hatchery Adipose Clip	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Backpack		Spring/Summer	N/A	6/1/2012	12/31/2016
13		Salmon, Chinook	Snake River fall-run (NMFS Threatened)	Listed Hatchery Adipose Clip	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Backpack		Fall	N/A	6/1/2012	12/31/2016
14		Steelhead	Snake River Basin (NMFS Threatened)	Listed Hatchery Adipose Clip	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Backpack		Summer	N/A	6/1/2012	12/31/2016
15		Salmon, sockeye	Snake River (NMFS Endangered)	Listed Hatchery Adipose Clip	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Backpack		N/A	N/A	6/1/2012	12/31/2016
16		Salmon, Chinook	Snake River spring/summer-run (NMFS Threatened)	Listed Hatchery Adipose Clip	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Boat		Spring/Summer	N/A	6/1/2012	12/31/2016
17		Salmon, Chinook	Snake River fall-run (NMFS Threatened)	Listed Hatchery Adipose Clip	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Boat		Fall	N/A	6/1/2012	12/31/2016
18		Steelhead	Snake River Basin (NMFS Threatened)	Listed Hatchery Adipose Clip	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Boat		Summer	N/A	6/1/2012	12/31/2016
19		Salmon, sockeye	Snake River (NMFS Endangered)	Listed Hatchery Adipose Clip	Juvenile	Male and Female	50	1	Capture/Handle/Release Fish	Electrofishing, Boat		N/A	N/A	6/1/2012	12/31/2016

NEPA Checklist

1) If your activities will involve equipment (e.g., scientific instruments) or techniques that are new, untested,or otherwise have unknown or uncertain impacts on the biological or physical environment , please discuss the degree to which they are likely to be adopted by others for similar activities or applied more broadly.

Nothing new or untested is involved.

2) If your activities involve collecting, handling, or transporting potentially infectious agents or pathogens (e.g., biological specimens such as live animals or blood), or using or transporting hazardous substances (e.g., toxic chemicals), provide a description of the protocols you will use to ensure public health and human safety are not adversely affected, such as by spread of zoonotic diseases or contamination of food or water supplies.

No infectious agents or pathogens are involved. The Department does use in the field commercial grade formalin and 90% ethanol to preserve fish and macroinvertebrates, respectively. These materials are handled at the truck away from the stream in accordance with OSHA guidelines.

3) Describe the physical characteristics of your project location, including whether you will be working in or near unique geographic areas such as state or National Marine Sanctuaries, Marine Protected Areas, Parks or Wilderness Areas, Wildlife Refuges, Wild and Scenic Rivers, designated Critical Habitat for endangered or threatened species, Essential Fish Habitat, etc. Discuss how your activities could impact the physical environment, such as by direct alteration of substrate during use of bottom trawls, setting nets, anchoring vessels or buoys, erecting blinds or other structures, or ingress and egress of researchers, and measures you will take to minimize these impacts.

We may work in any stream or river throughout the state of Idaho. This includes waters in any federal or state designation. Impacts to rivers are minimal with some macroinvertebrate sampling along the shore. Streams are disturbed at the location of sampling from walking on substrate and collection of macroinvertebrates. All electrofishing is single pass. No structures are constructed and nothing is left behind with the exception of an occasional temperature logger or other water quality sampler.

4) Briefly describe important scientific, cultural, or historic resources (e.g., archeological resources, animals used for subsistence, sites listed in or eligible for listing in the National Register of Historic Places) in your project area and discuss measures you will take to ensure your work does not cause loss or destruction of such resources. If your activity will target marine mammals in Alaska or Washington, discuss measures you will take to ensure your project does not adversely affect the availability (e.g., distribution, abundance) or suitability (e.g., food safety) of these animals for subsistence uses.

Since our work involves potentially any water body in the state, scientific, cultural and historical resources may be encountered. However, they are not targeted and if their existence is known, we tend to stay away from them.

5) Discuss whether your project involves activities known or suspected of introducing or spreading invasive species, intentionally or not, (e.g., transporting animals or tissues, discharging ballast water, use of equipment at multiple sites). Describe measures you would take to prevent the possible introduction or spread of non-indigenous or invasive species, including plants, animals, microbes, or other biological agents.

Because we travel from one water body to another, there is the potential to unintentionally spread invasive species attached to boots and equipment. However, we take precautions to limit the spread of invasive species through inspection and decontamination of boots and equipment with sparquat prior to travel to the next site.

Project Contacts

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Lance Holloway	Co-Investigator
Mary Anne Nelson	Co-Investigator
Jason Pappani	Co-Investigator
Steve Robinson	Co-Investigator
Troy Saffle	Co-Investigator
Josh Schultz	Co-Investigator
Daniel Stewart	Co-Investigator
Hawk Stone	Co-Investigator
Lynn Van Avery	Co-Investigator
Sean Woodhead	Co-Investigator

Attachments

References - P17048T12References.docx (Added Dec 23, 2011)
Resources Needed - P17048T15Resources.docx (Added Dec 23, 2011)

Status

Application Status: Application Complete
Date Submitted: January 4, 2012
Date Completed: January 11, 2012
FR Notice of Receipt Published: April 24, 2012 **Number:** 79 FR 24466
Comment Period Closed: May 24, 2012 **Comments Received:** No **Comments Addressed:** No
Last Date Archived: December 31, 2012

- **ESA Section 10(a)(1)(A) permit (Pacific fish)**

  Current Status: Issued **Status Date:** June 8, 2012
  Section 7 Consultation: Formal Consultation
  NEPA Analysis: Categorical Exclusion
  Expire Date: December 31, 2016
  Analyst Information:

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Modification Requests